

REMARKS

Favorable reconsideration of this application, in light of the following discussion and in view of the present amendment, is respectfully requested.

Claims 1, 5 and 11 are amended. Claims 1, 5-7 and 10-13 are pending.

I. Rejection under 35 U.S.C. § 102

In the Office Action, at page 3, claims 1, 5-7 and 11 were rejected under 35 U.S.C. §102(e) as being unpatentable over U.S. Patent No. 6,782,189 to Ando et al. This rejection is respectfully traversed because Ando does not discuss or suggest:

making a table of the extracted information, the table including only information to be referenced in reproducing the program data of the desired program at variable speed;...

wherein the extracting of the information comprises extracting a program allocation table (PAT), a program map table (PMT), location information of the I-picture, and description information of each packet, and

wherein the program data of the desired program is reproduced by referring to the extracted information stored in the table,

as recited in amended independent claim 1.

Ando shows at Fig. 9 an internal structure of a stream block header including, for example, information as to an I-picture mapping table 641, a B/P-picture mapping table 642, a transport packet mapping table 632 including a video packet mapping table 643, an audio packet mapping table 644, and a program unique information mapping table 645. At cited Fig. 20, Ando shows and discusses a time relationship table 2 that records a PTS value list in units of I-pictures and designates a time stamp (ATS) value of a corresponding I-picture transfer start time 4.

Ando does not discuss or suggest making a single table of only extracted information that is to be referenced in reproducing the program data of a desired program. Ando merely generally discusses a stream block header including information such as a program unique information mapping table 645, but does not suggest creating a table of only extracted information that is used in reproducing the program data of the desired program.

In particular, the present invention stores in the table a program allocation table, a program map table, location information of an I-picture and description information of each packet of program data. Further, this extracted information stored in this table is accessed when

the program data is reproduced. Thus, for example, all of the information necessary to play or trick-play (variable speed) the program data is easily accessed in one single table, instead of having to access the PAT and the PMT scattered in the transport stream. Therefore, the present invention avoids the problems associated with having to reconstruct the PAT and the PMT. By referring to the table, play and trick play are performed more quickly and efficiently because all of the reference information needed to be referred to in reproducing the desired program is easily accessible in the table.

Ando discusses in Fig. 9, an internal structure of a stream block header. Ando discusses in Fig. 20 only a time relationship table 2 that describes corresponding data transfer time information (I-picture transfer start time 4), data transfer time information (I-picture transfer end time 5), and the total number 10 of packets from the beginning of a cell to a target I-picture in units of PTS values. Ando does not suggest that one table is used to store a Program Allocation Table (PAT), a Program Map Table (PMT) and a location of an I-picture, for example, so that this table can be easily accessed when the program data of the desired program is reproduced.

Further, Ando does not suggest that a table of reference information used to reproduce program data of a desired program is stored together with the program data. Ando merely discusses a time relationship table indicating the relationship between the time stamp information recorded in stream data at each I-picture start time position and display time information (PTS) for the user. Ando does not suggest that one table is referred to in reference to reproducing program data associated with the table.

In addition, Ando does not discuss or suggest a table that includes only information to be referenced in reproducing the program data of the desired program at variable speed. In particular, the time relationship table 2 of Ando that indicates the relationship between the time stamp information and the display time information is not necessary in reproducing program data of a desired program at variable speed.

In contrast, the present invention is concerned with being able to perform trick plays, such as Fast Find (FF) and Rewind (REW), for which PAT, PMT and location information of an I-picture are needed and should be easily accessible in one location. Ando does not suggest that one location, i.e., a single table, stores all the reference information needed to reproduce program data at variable speed.

Therefore, as Ando does not discuss or suggest all the features of amended independent claim 1, claim 1 patentably distinguishes over the reference relied upon.

Further, Ando does not discuss or suggest "a control unit which:...makes a program

table having the extracted PAT information, the PMT information, and the location information of the I-picture, including the description information, the program table including only information to be referenced in reproducing the program data of the desired program at variable speed; and a storing apparatus which stores the program packets and the program table, wherein the program data of the desired program is reproduced by referring to the extracted information stored in the table," as recited in amended independent claim 5. Therefore, claim 5 patentably distinguishes over the reference relied upon.

Additionally, Ando does not discuss or suggest "creating a table containing the extracted information, the table including only information to be referenced in reproducing the program data of the desired program at variable speed; storing the created table with the program data in storage; and reproducing the program data of the desired program by referring to the extracted information stored in the table," as recited in amended independent claim 11. Therefore, claim 11 patentably distinguishes over the reference relied upon.

Claims 6 and 7 depend either directly or indirectly from amended independent claim 5 and include all the features of claim 5, plus additional features. Therefore, claims 6 and 7 patentably distinguish over the reference relied upon for at least the reasons noted above.

Accordingly, withdrawal of the § 102(e) rejection is respectfully requested.

II. Rejections under 35 U.S.C. § 103

In the Office Action, at pages 5-6, claims 10, 12 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over various combinations of Ando '189, U.S. Patent No. 6,215,746 to Ando et al., U.S. Patent No. 6,353,613 to Kubota, and U.S. Patent No. 6,950,604 to Kato et al. These rejections are respectfully traversed.

As discussed above, Ando '189 does not discuss or suggest all the features of amended independent claims 1, 5 and 11. Ando '746, Kubota and Kato fail to make up for the deficiencies in Ando '189. Therefore, claims 1, 5 and 11 patentably distinguish over the references relied upon. Claims 10, 12 and 13 depend either directly or indirectly from amended independent claims 1 and 5 and include all the features of their respective independent claims, plus additional features. Therefore, claims 10, 12 and 13 patentably distinguish over the references relied upon for at least the reasons noted above.

Accordingly, withdrawal of the § 103(a) rejections is respectfully requested.

Conclusion

In accordance with the foregoing, claims 1, 5 and 11 have been amended. Claims 1, 5-7 and 10-13 are pending and under consideration.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

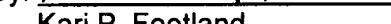
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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